

## SYSTEM AND HOST ARRANGEMENT FOR TRANSMISSION OF ELECTRONIC MAIL

### FIELD OF THE INVENTION

The present invention relates to a system and to an arrangement for transmitting electronic mail over mobile telephone networks with the aid of means existing in the network for routing short text messages, such as SMS-messages. The invention also relates to a method of registering subscribers with electronic mail address. More particularly, the invention relates to an electronic data transmission system wherein the data is linked with a modified short text message. The invention also embodies a local free-standing host arrangement which can be connected to existing mobile telephone networks, subscriber exchanges or switching centres, communication networks, and so on.

### DESCRIPTION OF THE BACKGROUND ART

Existing mobile telephone networks include operator services in the form of short message services (SMS) in GSM (Global System for Mobile Communication), i.e. messages (about 100 data characters) which are received and converted to text form in the display of a mobile station (MS), MS displays are only able to accommodate a limited number of characters at a time, and it would therefore be clumsy to receive longer messages via the MS unit, such as text masses included in electric mail possibly together with files (text, graphics, etc.).

In order to route the SMS message through the mobile telephone network to the correct receiver in a mobile telephone network via an address, the network has a GMSC function (Gateway Mobile Switching Centre function) in one or more mobile services switching centres (MSC) in the mobile telephone network. GMSC functions administer telephone traffic for communication systems external of the mobile telephone network. The SMS messages to be routed through the network are linked via the GMSC function to an SMS-centre (SMS-C) which is responsible for routing the message to the correct MS unit, wherewith the MS unit indicates the receipt of SMS messages.

Further GSM, ADC (American Digital Cellular), JDC (Japan Digital Cellular), or other wireless telephone systems and Internet constitute two of the most rapidly developing commercial telecommunications systems. However, it is difficult to communicate between the respective commercial systems. Calling the internet via the GSM system is not particularly practical configuration; air time is expensive, connection waiting times and calls are of long duration, etc. Furthermore, existing internet connections are not optimized for use by mobile telephones.

It will be evident from the foregoing that there is a need to be able to send longer text messages than SMS messages to mobile telephone subscribers, and the need for simplified solutions for access between mutually different communications system.

### SUMMARY OF THE INVENTION

The present invention relates to a system and to an arrangement for transmitting a practically unlimited volume of text and picture data to a subscriber of a mobile telephone network through the medium of an MS unit.

The invention relates to a system for transmitting electronic mail over a mobile telephone network with the aid of short text message routing means existing in the network. The system includes:

means for routing electronic mail from a network which manages such mail and has an interface connected towards

means for receiving and storing electronic mail which is allocated a short text message with agent connected to means for connecting data with a mobile telephone switching centre and short text message routing means existing in the mobile telephone network;

means in a mobile station for receiving the short text messages from said existing routing means and storing said messages in the mobile station;

means for establishing a connection between the mobile station and a computer means for transmitting data between the mobile station and the computer, and vice versa; and

software containing agent decoding means and instructions for initiating the transmission of electronic mail via said means for establishing a data connection setup.

In one embodiment, the software containing means is installed in a computer.

In another embodiment, the software containing means is installed in a mobile station.

Electronic mail sent from the computer to the host arrangement is allocated a short text message provided with control characters and agent for distribution to another mobile telephone subscriber. The agent includes encryption files, host number, job identity and job pass code. The encryption field can be generated randomly for each short text message.

The invention also relates to a selectively positionable host arrangement for receiving and storing electronic mail and for transmitting electronic mail with the use of the means that exist in the mobile telephone network for routing short text messages to mobile stations, wherein the arrangement includes:

means for receiving and storing electronic mail which is allocated a short text message with agent, and having an interface towards electronic mail routing means; and

means for establishing a data connection via local means for telecommunication with a mobile telephone switching centre, and means existing in the mobile telephone network for routing short text messages with said agent to a mobile station.

The present invention also relates to a method for registering subscribers with an electronic mail address in systems for transmitting electronic mail over a mobile telephone network with the aid of network existing short text message routing means, wherein electronic mail is allocated a short text message that includes an agent which is used to initiate transmission of electronic mail between a communications network and mobile stations connected to transmission software, and vice versa, wherein

the software is installed in a computer;

wherein installed software automatically calls an electronic mail receiving and storing means upon initiation of the software;

wherein installed communications software commands a user (client) to insert desired electronic mail addresses, personal information, mobile station subscriber number, software initiation password, and information relating to user computer configuration; and

in that electronic mail receiving and storing means sends an activation code to the computer with installed software through the medium of a short text message, said code being used to activate software for receiving and transmitting electronic mail with agent.